

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A low-friction sliding mechanism wherein a low-friction agent composition is interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B), wherein

the DLC coated sliding member (A) is formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material;

the sliding member (B) is formed of at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material; and

the low-friction agent composition contains an oxygen-containing organic compound (C), the oxygen-containing organic compound (C) being at least one kind selected from a group consisting of alcohols, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof,

wherein the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

2. (Previously Presented) The low-friction sliding mechanism according to claim 1, wherein, in the sliding member (B), the metal material is at least one kind of material selected from a group consisting of a ferrous material, an aluminum alloy material and a magnesium alloy-based material; and the coated material is formed by coating a thin film of at least one kind of material selected from a group consisting of DLC, TiN and CrN.

3-9. (Canceled)

10. (Previously Presented) A method of reducing a friction, comprising: supplying a low-friction agent composition containing an oxygen-containing

organic compound (C) on sliding surfaces of a DLC coated sliding member (A) and a sliding member (B),

wherein the DLC coated sliding member is formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material,

wherein the sliding member (B) is formed of at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material so as to lubricate the sliding surfaces,

wherein the oxygen-containing organic compound (C) is at least one kind selected from a group consisting of alcohols, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof,

wherein the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

11. (Canceled)

12. (Previously Presented) A manual transmission characterized by using the low-friction sliding mechanism according to claim 1.

13. (Previously Presented) A final reduction gear unit characterized by using the low-friction sliding mechanism according to claim 1.

14. (Previously Presented) A low-friction agent composition that is used in the low-friction sliding mechanism according to claim 1.

15. (Previously Presented) A low-friction agent composition that is used in the friction reduction method according to claim 10.

16. (Currently Amended) A low-friction sliding mechanism comprising a low-friction agent composition interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B), wherein:

the DLC coated sliding member (A) is formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material,

the sliding member (B) is formed of at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material,

the low-friction agent composition contains an oxygen-containing organic compound (C), the oxygen-containing organic compound (C) being at least one kind selected from a group consisting of alcohols, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof, and,

~~the coated DLC has a hydrogen content of 10 atomic percent or less,~~

the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

17. (Currently Amended) A low-friction sliding mechanism comprising a low-friction agent composition interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B), wherein:

the DLC coated sliding member (A) is formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material,

the sliding member (B) is formed of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material,

the low-friction agent composition contains at least one kind selected from a group consisting of an oxygen-containing organic compound (C), the oxygen-containing organic compound (C) being at least one kind selected from a group consisting of alcohols, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof, and,

~~the coated DLC has a hydrogen content of 0.5 atomic percent or less,~~

the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

18. (Currently Amended) A low-friction sliding mechanism comprising a low-friction agent composition interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B), wherein:

the DLC coated sliding member (A) is formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material,

the sliding member (B) is formed of at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material,

the low-friction agent composition contains an oxygen-containing organic compound (C), the oxygen-containing organic compound (C) being at least one kind selected from a group consisting of alcohols, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof, and,

~~the coated DLC is made of a C diamond-like carbon that does not contain hydrogen,~~

the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

19-23. (Canceled)

24. (Currently Amended) A low-friction sliding mechanism wherein a low-friction agent composition is interposed between sliding surfaces of a DLC coated sliding member (A) and a ~~eliding~~ sliding member (B), wherein:

the DLC coated sliding member (A) is formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material,

the sliding member (B) is formed of at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material,

the low-friction agent composition comprises an ester, the ester comprising at least one kind selected from the group consisting of glycerin monooleate, glycerin dioleate, sorbitan monooleate, sorbitan dioleate, and any combination of these, and

~~an oxygen-containing organic compound (C)~~ the ester is contained in the range of 0.05 to 3.0 % mass relative to a total mass amount of the low-friction agent composition.

25. (New) A manual transmission comprising a low-friction sliding mechanism wherein a low-friction agent composition is interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B), wherein the DLC coated sliding member (A) is formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material; the sliding member (B) is formed with at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material obtained by coating a thin film on a surface of the metal material or the non-metal material; and the low-friction agent composition contains an oxygen-containing organic compound (C), the oxygen-containing organic compound (C) being at least one selected from a group consisting of alcohols, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof, wherein the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0% mass relative to a total mass amount of the low friction agent composition, wherein the DLC coated sliding member is an input shaft of the manual transmission, the input shaft being formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material.

26. (New) A final reduction gear unit comprising a low-friction sliding mechanism wherein a low-friction agent composition is interposed between sliding surfaces of a DLC coated sliding member (A) and a sliding member (B), wherein the DLC coated sliding member (A) is formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material; the sliding member (B) is formed with at least one kind of material selected from a group consisting of a metal material, a non-metal material and a coated material

obtained by coating a thin film on a surface of the metal material or the non-metal material; and

the low-friction agent composition contains an oxygen-containing organic compound (C), the oxygen-containing organic compound (C) being at least one selected from a group consisting of alcohols, esters, ethers, ketones, aldehydes, carbonates and derivatives thereof,

wherein the oxygen-containing organic compound (C) is contained in the range of 0.05 to 3.0% mass relative to a total mass amount of the low-friction agent composition,

wherein the DLC coated sliding member is a member selected from the group consisting of a roller of a side bearing, a differential case, a pinion mate shaft, a pinion mate gear, a washer and a roller of a roller bearing for supporting a drive shaft, the selected member being formed by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on a base material,

wherein the coated material of the sliding member (B) is obtained by coating diamond-like carbon having a hydrogen content of 20 atomic percent or less on the surface of the metal material or the non-metal material.

27. (New) A final reduction gear unit as claimed in Claim 26, wherein the diamond-like carbon is coated at an end face of the roller of the side bearing, an inner surface of the differential case, an outer peripheral surface of the pinion mate shaft, a back surface of the pinion mater gear, both surfaces of the washer, or an end surface of the roller of the roller bearing for supporting the drive shaft, wherein the diamond-like carbon is coated at a sliding surface of the sliding member (B).